REMARKS

Claims 1-5, 7-11, and 13-21 are pending in the application, of which Claims 1, 10 and 16 are independent. In the Office Action, Claims 1-5, 7-11, and 13-15 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. In addition, Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, as failing to provide sufficient antecedent basis for a recited claim limitation. Claims 1-2, 4-5, and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,177,048, issued to Lagerstedt (hereinafter "Lagerstedt"). Further, Claims 1, 2, 4-5, 7-11, 13, and 15-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,283,033, issued to Dodrill (hereinafter "Dodrill"), in view of Lagerstedt. Claims 3 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dodrill in view of U.S. Patent No. 4,667,454, issued to McHenry (hereinafter "McHenry").

Claim Amendments

Claims 1, 10, and 16 are presently amended to more clearly distinguish the claimed subject matter from the references cited by the Examiner in the Office Action. Claim 21 is canceled.

Rejections under 35 U.S.C. § 112

Claims 1-5 and 7-9 stand rejected under 35 U.S.C. § 112 as failing to comply with the enablement requirement. Specifically, the Examiner asserts the following:

> It is not clear as to how the control pressure within the vessel can be less than the theoretical pressure. At any point when the control pressure is reduced within the vessel the theoretical pressure, as the sum of the vapor pressure and the air pressure, will also inherently change. Thus, although

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> the actual control pressure could be lowered below the theoretical value, the theoretical pressure at that instant when the control pressure is reduced would also be adjusted so that the theoretical and control pressure would still be equal. (Office Action at paragraph 5).

As presently amended, Claim 1 recites a cooling process that includes the following:

> *actively reducing the control pressure* within the vessel according to a predefined pressure schedule; said pressure schedule comprising a plurality of predetermined control pressure values, each control pressure value corresponding to a control temperature value included in the temperature schedule and being less than a theoretical pressure based on the corresponding control temperature value. (Emphasis added).

Applicant respectfully submits that one of skill in the art would readily appreciate how the control pressure in the vessel could be maintained below a theoretical pressure based on the temperature inside the vessel. The specification discloses that known systems utilize a pressure regulator in the retort to compensate for a pressure drop during the cooling phase by inserting additional air into the vessel. (Specification at page 5, lines 1-4). One of skill in the art would know that the disclosed pressure regulator could also actively reduce the pressure inside the vessel by removing air from the vessel. Because the vessel volume is essentially constant, when a theoretical pressure in the vessel is calculated based on the temperature inside the vessel, the presence of less air in the vessel results in the theoretical pressure being higher than the actual pressure in the vessel. Thus, by actively reducing the vessel pressure with a pressure regulator, the pressure vessel can be maintained at a pressure lower than a theoretical pressure based on the vessel temperature.

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In order to further clarify that the vessel pressure is then regulated to follow the pressure schedule and that the pressure inside the vessel is not simply a natural consequence of the temperature schedule, Claims 1 and 10 are presently amended to recite that the pressure inside the vessel is actively reduced or controlled.

In view of the foregoing, applicant respectfully submits that the specification would enable one of skill in the art to maintain the control pressure in the pressure vessel below a theoretical pressure based on the temperature in the vessel. Accordingly, applicant respectfully submits that Claim 1 is in condition for allowance. If Claim 1 is allowed, then Claims 2-5 and 7-9 should also be allowed.

Claims 10-11 and 13-15 are rejected under 35 U.S.C. § 112, first paragraph, for failure to enable a person skilled in the art to practice the claimed subject matter in a manner commensurate with the scope of the claims. Specifically, the Examiner asserts the following regarding the specification:

> ...while being enabling for minimizing the difference between the pressure in the vessel and the pressure in the paperboard material, thereby aiding to prevent moisture from entering into the paperboard of the container, does not reasonably provide enablement for wherein during at least a portion of the cooling phase, controlling the pressure within the vessel so that the pressure in the vessel *is less than* the pressure in the paper board material. (Office Action at paragraph 6) (emphasis original).

Claims 1, 10, and 16 are presently amended to recite a pressure schedule with "the control pressure values being sufficient to prevent the closed container from bursting." Thus, the recited control pressure values are not only "less than a theoretical pressure based on the

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corresponding control temperature value," but also "sufficient to prevent the closed container from bursting."

Applicant respectfully submits that Claims 1, 10, and 16 as presently amended limit the recited control pressures to a range that is fully enabled by the specification. Accordingly, applicant respectfully requests that the rejection of Claim 10 under 35 U.S.C. § 112, first paragraph, be withdrawn. If Claim 10 is allowed, then Claims 11 and 13-15 should also be allowed.

Claim 1 stands rejected under 35 U.S.C. § 112, second paragraph, for providing insufficient antecedent basis for the recited limitation "the theoretical pressure." Claim 1 is presently amended to recite "a theoretical pressure." Accordingly, applicant respectfully submits that Claim 1 is allowable as amended.

Rejections under 35 U.S.C. § 102

In the Office Action, Claims 1-2, 4-5, and 7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Lagerstedt. Briefly, Lagerstedt teaches a method for sterilizing a fiber based container filled with a food product. When heated, the disclosed containers provide a good seal against moisture and liquid until the temperature reaches a critical temperature, at which point the sealing characteristics are partly lost. (Col. 2, lines 18-25; Col. 2, line 65-Col. 3, line 5). As a result, Lagerstedt teaches a cooling method for a sterilization process whereby the container is cooled with a medium not containing water, preferably air, until the container reaches the critical temperature. (Col. 3, lines 64-67). When the container reaches critical temperature, the cooling medium not containing water is exchanged for water, which further cools the container. Lagerstedt further discloses that introducing the medium not containing water into the autoclave causes a reduction in the pressure of the autoclave. (Col. 2, lines 30-45).

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"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). As presently amended, Claim 1 recites a method of processing a food product in a retort vessel, the method including "cooling the food product within the vessel by reducing the control temperature within the vessel according to a predefined temperature schedule" and "actively reducing the control pressure within the vessel according to a predefined pressure schedule; said pressure schedule comprising a plurality of predetermined control pressure values, each control pressure value corresponding to a control temperature value included in the temperature schedule and being less than a theoretical pressure based on the corresponding control temperature value." While Lagerstedt teaches that the pressure in the autoclave will be reduced by the introduction of the cooling medium not containing water, it does not teach or suggest "actively reducing the control pressure within the vessel" or that each control pressure in the pressure schedule is "less than a theoretical pressure based on the corresponding control temperature value."

For at least the foregoing reasons, Lagerstedt does not teach or suggest every limitation of Claim 1, either expressly or inherently. Accordingly, applicant respectfully traverses the rejection of Claim 1 under 35 U.S.C. § 102(b). If Claim 1 is allowed, then Claims 2, 4-5, and 7 should also be allowed.

Rejections under 35 U.S.C. § 103(a)

Claims 1-2, 4-5, 7-11, 13, and 15-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dodrill in view of Lagerstedt. Dodrill teaches a process for sterilizing the contents of a sealed deformable package so that the package does not irreversibly collapse or expand. More specifically, Dodrill teaches a method to accurately calculate the internal package

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pressure as a function of temperature and therefore, enables the operator or automatic controller to adjust the processing tank pressure to be substantially equal to the pressure within the container at any given time. (Col. 5, lines 12-17). "Substantially equal" is defined as follows:

> "Substantially equal" pressure in the processing vessel and within the package is considered herein to have been achieved when these two pressures are maintained near enough together to prevent the container from irreversibly collapsing or expanding. The tolerable pressure difference depends on the type of package and its contents. Some pressure difference is actually desirable in some instances. For example, it is sometimes desirable to allow the package pressure to slightly exceed the processing vessel pressure to slightly inflate the package and thus prevent it from collapsing at a vulnerable point, such as a corner. (Col. 6, lines 38-49).

During the heating, or "come-up" phase, the pressure in the processing tank is maintained at a pressure equal to or about the sum of the partial pressure of air (or gas) and partial saturated water (or volatile material) vapor pressure inside the package. (Col. 5, lines 26-29). During the "come-down" phase, the pressure inside the processing tank is maintained at about the sum of the partial pressures of the air (or gas) and the partial saturated water (or volatile material) vapor pressure inside the package. (Col. 5, line 68-Col. 6, line 4). The partial pressure of air is calculated using the ideal gas law at the average temperature of the headspace. (Col. 6, lines 4-6). The partial saturated water vapor pressure is calculated at the lowest temperature inside the package, typically the undersurface of the lid of the package. (Col. 6, lines 6-9).

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As stated in MPEP §2143:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicant respectfully submits that the Examiner has not made a *prima facie* case of obviousness because Dodrill and Lagerstedt, even in theoretical combination, do not teach or suggest every limitation of the present claims.

Claim 1

As presently amended, Claim 1 recites a method of processing a food product, wherein the method comprises "cooling the food product within the vessel by reducing the control temperature within the vessel according to a predefined temperature schedule" and "actively reducing the control pressure within the vessel according to a predefined pressure schedule; said pressure schedule comprising a plurality of predetermined control pressure values, each control pressure value corresponding to a control temperature value included in the temperature schedule." Claim 1 further recites that each control pressure value is "less than a theoretical pressure based on the corresponding control temperature value, thereby helping to prevent moisture from entering into the exposed edge of paperboard." Thus, unlike Dodrill, which

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teaches controlling the pressure within the vessel according to a calculated pressure *inside the package* based on *several temperatures inside the package*, Claim 1 recites that the pressure within the vessel is controlled according to a theoretical pressure *in the vessel* based on *a single temperature inside the vessel*. Lagerstedt does not teach or suggest this limitation. Accordingly, even a theoretical combination of Dodrill and Lagerstedt does not teach or suggest each and every limitation of Claim 1.

Not only do Dodrill and Lagerstedt not teach or suggest each and every limitation of Claim 1, Dodrill actually teaches away from the limitations of Claim 1. Specifically, Dodrill states the following with regard to calculating the pressure inside the package:

> Use of the highest temperature of the contents for the water vapor partial pressure calculations leads to far superior and more accurate results than known before. It has been found less accurate, and consequently less effective, to use the average temperature of the contents or the temperature at the middle of the contents for calculating internal package pressure. (Col. 5, lines 41-47).

Thus, one of skill in the art would not be motivated to actively control the pressure in the vessel according to a theoretical pressure based on the temperature inside the vessel because doing so would inherently entail using an average temperature of the steam and the air in the vessel. Because Dodrill teaches that using a similar method for determining the pressure inside the container is "less accurate, and consequently less effective," one would not be motivated to use this method for determining the pressure inside the vessel.

For at least the foregoing reasons, applicant respectfully submits that that the Examiner has not made a *prima facie* case of obviousness. Accordingly, applicant respectfully requests

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that the rejection of Claim 1 be withdrawn. If Claim 1 is allowed, then Claims 2, 4-5, and 7-9, which depend therefrom, should also be allowed.

Claims 10 and 16

Applicant respectfully submits that the Examiner has failed to make a *prima facie* case of obviousness with respect to Claims 10 and 16. Claim 10 recites a "method of batch processing a food product located in a closed flexible container having a paperboard material component." Similarly, Claim 16 recites a "method of processing a container comprising a fiber-based material, the container containing a food product." Like Claim 1, Claims 10 and 16 both recite reducing a temperature within the vessel according to a predefined temperature schedule. Claims 10 and 16 further recite actively controlling the pressure in the vessel according to a pressure schedule comprising a plurality of predetermined control pressure values corresponding to the control temperature values of the temperature schedule. In addition, Claims 10 and 16 recite that each control pressure value is less than a theoretical pressure based on the corresponding control temperature value.

As discussed with regard to Claim 1, Dodrill and Lagerstedt, even in theoretical combination, do not teach or suggest the above-noted limitations of Claims 10 and 16. In addition, Dodrill teaches away from controlling the pressure in the vessel in the manner recited by these claims.

For at least these reasons, applicant respectfully submits that the Examiner has not made a *prima facie* case of obviousness. Accordingly, applicant respectfully submits that Claims 10 and 16 are in condition for allowance. If Claims 10 and 16 are allowed, then Claims 11, 13, 15, and 17-20, which depend therefrom, should also be allowed.

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Claims 3 and 14

Claims 3 and 14, which depend from Claims 1 and 10, respectively, are rejected under 35 U.S.C. § 103 as being unpatentable over Dodrill in view of McHenry. McHenry teaches a method of sterilizing food products in deformable containers wherein the sterilization process incorporates agitation of the heated containers to allow the food to more uniformly contact the walls of the containers, thereby improving heat sterilization and cooling. The Examiner relies on McHenry to disclose the limitation of Claims 3 and 14 that "the method of processing a food product is an agitation method." However, McHenry does not teach or suggest the deficiencies of Dodrill with respect to Claims 1 and 10 discussed in detail above. Accordingly, even a theoretical combination of Dodrill and McHenry would not teach or suggest each and every limitation of Claims 3 and 14. For at least this reason, applicant respectfully submits that Claims 3 and 14 are in condition for allowance.

Closure

For at least the foregoing reasons, applicant respectfully submits that Claims 1-5, 7-11, and 13-20 are in condition for allowance. An early and favorable action allowing these claims is respectfully solicited. The Examiner is requested to contact the undersigned at 206.695.1705 with any questions or concerns regarding this matter.

Respectfully submitted,

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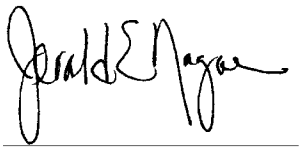

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